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Substitute for form 1449A/PTO	Application Number	10/758,758
SUPPLEMENTAL	Fing Date	JANUARY 15, 2004
INFORMATION DISCLOSURE	First Named Inventor	LUC VAN AUTRYVE, ET AL.
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Group Art Unit	2812 2823
	Examiner Name	UNKNOWN H. LEE
(Use as many sheets as necessary)	Attorney Docket Number	AMAT/8764.P1/FEP/OXD/AG

Submission Date

2005

of 1

Sheet 1

Examiner

			U.S. PATENT	DOCUMENTS	
Examiner	No 1	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where	
Initials*	No."	Number-Kind Code ^{2 (9 known)}	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear
The	A1	US- 6,559,017	05/06/2003	BROWN, ET AL.	
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the	A3	US- 5,569,501	10/29/1996	BAILEY, ET AL.	
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	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or	T ⁶
Initials*	No.'	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Relevant Figures Appear	
Vu	B1	KR 375093B (English Abstract Only)	03/08/2003	S. HAN		Х
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Date Considered

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SUPPLEMENTAL
INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

Complete if Known

Application Number 10/758,758

Filing Date January 15, 2004

First Named Inventor Autryve, et al.

Art Unit 2812 2527

Examiner Name Marianne L. Padgett H, LEE

(Use as many sheets as necessary)

or form 1449A/PTO

Sheet 1 of 1 Attorney Docket Number

			U.S. PATENT	OCUMENTS	
Examiner Cite	Document Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant	
Initials *	itials No. Number - Kind Cod	Number - Kind Code ² (if known)	MM-OD-YYYY	Cited Document	Passages or Relevant Figures Appear
Vin	A1	US-5,599,590	02/04/1997	Hayashi, et al.	
Va-	A2	US- 2002/0160592	10/31/2002	Sohn	
Ke-	A3	US- 2005/0056940	03/17/2005	Sandhu, et al.	
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Examiner Signature	Kinen Ming Lue	Date Considered	7/7/06	

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Application Number	10/758,758
Filing Date	JANUARY 15, 2004
First Named Inventor	LUC VAN AUTRYVE, ET AL.
Group Art Unit	UNKNOWN 2823
Examiner Name	UNKNOWN- H. LEE
Attorney Docket Number	AMAT/8764.P1/FEP/OXD/JW
Submission Date	April <u>20</u> , 2004

			U.S. PATENT	DOCUMENTS	
Examiner	Cite	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where
Initials* No.1 Number-Kind (Number-Kind Code ^{2 (f known)}	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear	
Vin	A1	US-6,650,480 B2	11/18/2003	Tanaka	
1	A2	US-6,573,030 B1	08/03/2003	Fairbairn, et al.	
	A3	US-6,495,390 B2	12/17/2002	Hawryluk, et al.	
	A4	US-6,479,821 B1	11/12/2002	Hawryluk, et al.	
	A5	US-6,303,476 B1	10/16/2001	Hawryluk, et al.	/
	A6	US-5,744,375	04/28/1998	Kao, et al.	
	A7	US-5,559,367	09/24/1996	Cohen, et al.	
1	A8	US-5,000,113	03/19/1991	Wang, et al.	
	A9	US-2003/0201466 A1	10/30/2003	Ogawa, et al.	
1,	A10	US-2003/0196995 A1	10/23/2003	Jennings	
V .	A11	US-2003/0148594 A1	08/07/2003	Yamazaki, et al.	
Vu	A12	US-2002/0139975 A1	10/03/2002	Lewis, et al.	/
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	FOREIGN PATENT DOCUMENTS					
	Cite	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Τ°
Initials*	No.'	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
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Sheet 1 of 1

Application Number	10/758,758
Filing Date	JANUARY 15, 2004
First Named Inventor	LUC VAN AUTRYVE, ET AL.
Group Art Unit	UNKNOWN 2823
Examiner Name	UNKNOWN H. LEE
Attorney Docket Number	AMAT/8764.P1/FEP/OXD/JW
Submission Date	June 25, 2004

			U.S. PATENT	DOCUMENTS	
Examiner		Document Number	Publication Date MM-DD-YYYY	Name of Patentee or	Pages, Columns, Lines, Where
Initials*	No.	Number-Kind Code ^{2 (8 known)}		Applicant of Cited Document	Relevant Passages or Relevant Figures Appear
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	А3	US-			
	A4	US-			
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	A14	US-			
	A15	US-		•	
	A16	U,S-			
	A17	US-			
	A18	US-			

Examiner Initials* Cite		Foreign Patent Document Pt	Publication Date	Name of Patentee or	Pages, Columns, Lines,	T ⁶
	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear			
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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application from to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450. Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. If you need assistance in completing the form. call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet of 2

Complete If Known			
Application Number	10/758,758		
Filing Date	January 15, 2004		
First Named Inventor	Luc Van Autryve		
Art Unit	2812 2827		
Examiner Name	Unassigned H. LFT		
Attorney Docket Number	AMAT/8764P1/FEP/OXD/JW		

	U.S. PATENT DOCUMENTS					
Examiner Cite Initials • No.1	Cita	Document Number	Publication Date MM-DD-YYYY	ation Date Name of Patentee or Applicant of	Pages, Columns, Lines, Where Relevant	
	No.1	Number - Kind Code ² (if known)			Passages or Relevant Figures Appear	
V.	A1	2002160592 A1	10/31/2002	Sun		
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet of 2

Complete if Known				
Application Number	10/758,758			
Filing Date	January 15, 2004			
First Named Inventor	Luc Van Autryve			
Art Unit	2012 282			
Examiner Name	Unassigned H. LEE			
Attorney Docket Number	AMAT/8764P1/FEP/OXD/JW			

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
Lu	C1	Article by Valentini et al., "Effect fo thermal annealing on the electronic properties of nitrogen doped amorphous carbon/p-type crystalline silicon heterojunction diodes", American Vacuum Society, 2003, pgs. 582-588.	
L	C2	Article by Barradas et al., "Growth and characterization of amorphous carbon films doped with nitrogen", Nuclear Instruments and Methods in Physics Research B, 161-163 (2000) pgs 969-974.	
Lu	СЗ	Article by Kuo et al., "Field emission studies of low-temperature thermal annealing of nitrogen- doped hydrogenated amorphous carbon (a-C:H:N) films", Diamond and Related Materials 10 (2001) pgs 889-894.	
La	C4	Article by Zhang et al., "Raman analysis of laser annealed nitrogen doped amorphous carbon film", Solid State Communications 123 (2002) pgs 97-100.	
L	C5	PCT International Search Report from International Application No. PCT/US 2004/032151, dated February 14, 2005	

Signature Considered

Date

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